REMARKS

This response is submitted in response to the non-final Office action dated July 5, 2005. Claims 25-40, 42-57, 59, 60, 82-86, 92-94, 100 and 102 are pending in the application. Claims 25-40, 42-57, 59, 60, 82-86, 92-94, 100 and 102 are rejected under 35 U.S.C. §112, first paragraph and second paragraph, and under 35 U.S.C. §103(a). In response, Applicants have amended Claims 25, 44, 92 and 102. These amendments do not add new matter. Claims 25, 44, 92 and 102 have been amended to include the limitation requiring a ring electrode with a cylindrical inner opening and a flat region of sufficient surface area to collect dust particles and other particulate matter. Support for this amendment can be found in the specification at page 21, lines 3-37 and page 22, lines 1-2. Claims 25, 44 and 102 have also been amended to include the limitation requiring a pin-ring electrode configuration where at least a portion of dust particles and other particulate matter in airflow collect on the ring electrodes. Support for this amendment can be found in the specification at page 5, lines 22-25. In view of the amendments and response set forth below, Applicants respectfully submit that the Patent Office should withdraw its rejections.

In the Office action, Claims 25-40, 42-57, 59, 60, 82-86, 92-94, 100 and 102 stand rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. The Office action took the position that the limitation "cylindrical surface" in Claims 25, 44 and 92 constitutes new matter because it lacks adequate support in the application as originally presented.

Applicants submit that the specification satisfies the enablement requirement under 35 U.S.C. §112, first paragraph. First, Applicants have amended independent Claims 25, 44 and 92 to require a ring electrode with a "cylindrical inner opening." Though not mentioned in the Office action, independent Claim 102 was similarly amended to address this rejection. The specification supports these amendments on page 21, lines 3-10. Second, the common dictionary definition for "cylinder" requires a solid bounded by two parallel planes and a surface having a circle as its directrix. Between the two parallel, circular surfaces, there must be a finite distance in order for the two parallel planes to be considered parallel and not just a single plane. The ring electrode in the claims has this finite distance, referred to as distance T in figures 4I-4K as well as page 21, lines 15-17 of the specification. Furthermore, figure 4I shows the inner opening

required by the claims. As a result, Applicants respectfully submit that independent Claims 25, 44 and 92, as amended, and the claims that depend on these independent claims, satisfy the enablement requirement and request that the rejection be reconsidered and withdrawn.

In the Office action, Claims 25-40, 42-57, 59, 60, 82-86, 92-94, 100 and 102 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. The Office action took the position that it is unclear which part of the electrode Applicants are trying to claim with the use of "cylindrical surface" in independent Claims 25, 44 and 92. By requiring a ring electrode with a cylindrical inner opening, Claims 25, 44 and 92, as amended, are clearly referring to the inner opening of the ring electrode, illustrated in figure 4I of the specification, and further supported on page 21, lines 3-10 of the specification. Though not mentioned in the Office action, independent Claim 102 was similarly amended to address this rejection. Applicant respectfully submits that independent Claims 25, 44 and 92, as amended, and the claims that depend on these independent claims, distinctly claim the subject matter that Applicants regard as the invention.

In the Office action, Claims 25-33, 35-37, 39, 42-52, 54-56, 59, 82-86, 92-94, 100 and 102 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 4,516,991 to Kawashima (*"Kawashima"*) in view of US Patent No. 3,638,058 to Fritzius (*"Fritzius"*). The Office action took the position that while *Kawashima* teaches all the elements of the claimed invention, except the pin-ring electrode configuration, *Fritzius* remedied this deficiency by disclosing an ion wind generator that comprises pin-shaped cathodes and ring-shaped anodes. Applicants respectfully request that the basis for this rejection be reconsidered and the rejection be withdrawn.

Applicants submit that even the references aere properly combinable they still do not contain each of the limitations of the claimed invention. Of the rejected claims, only Claims 25, 44, 92 and 102 are independent. With regard to Claims 25, 44 and 102, both references lack a pin-ring electrode configuration that produces an electro-kinetic airflow from the air inlet vent to the air outlet vent such that at least a portion of dust particles and other particulate matter in said airflow collect on said ring electrodes. The Patent Office even states that *Kawashima* lacks this element. *See,* Office action, page 4, section 10. *Fritzius* fails to remedy this deficiency because

it lacks air cleaning capacity. Even Figure 1 and the paragraph bridging columns 1-2, both of which were highlighted in the Office action, refer only to ions collecting on the ring, and not dust or any other particulate matter. *See, Fritzius,* column 2, lines 1-7. The ring illustrated in Figure 1 in *Fritzius* lacks the sufficient surface area needed to collect dust and other particulates. To do so, the invention would need surface area beyond that of the ring. While Applicants' claimed invention requires such a flat surface (see Figure 4I), *Fritzius* clearly lacks it. Furthermore, there is no suggestion or motivation to combine these references to arrive at the missing elements, so as to render obvious independent Claims 25, 44 and 102.

With regard to Claim 92, the cited references, when combined, fail to disclose a pin-ring electrode configuration including a first pin electrode that is directed toward an opening in a second ring electrode. Figures 4A-4H of the specification, for example, illustrate this staggered configuration. The specification further supports this configuration on page 22, lines 10-25. In contrast, *Kawashima* teaches a non-pin-ring configuration. *See, Kawashima,* Figures 6-9. Furthermore, *Fritzius* teaches a symmetric, rather than staggered, arrangement of pin and ring electrodes. *See, Fritzius,* Figure 1. Together, these references fail to disclose, suggest or teach a staggered pin-ring configuration of electrodes that can effectively provide a flow of air from which particulate matter has been substantially removed. Furthermore, as stated above, the cited references fail to disclose a ring-electrode with a flat dust collecting surface.

For the reasons discussed above, Applicants respectfully submit that the cited references fail to render the claimed subject matter obvious. Accordingly, Applicants respectfully request that the obviousness rejections of Claims 25-33, 35-37, 39, 42-52, 54-56, 59, 82-86, 92-94, 100 and 102 be withdrawn.

In the Office action, Claims 34, 40, 53 and 57 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Kawashima* and *Fritzius* as applied to Claims 25 and 44 above, and further in view of US Patent No. 4,772,297 to Anzai (*"Anzai"*). As stated above, *Kawashima* and *Fritzius*, as applied to independent Claims 25 and 44, both fail to disclose a pin-ring electrode configuration that produces an electro kinetic airflow from the air inlet vent to the air outlet vent such that at least a portion of dust particles and other particulate matter in said airflow collect on said ring electrodes. The Office action took the position that *Anzai* addressed the louvers recited in the dependent Claims 34, 40, 53 and 57. However, *Anzai* still fails to remedy

the deficiencies present in *Kawashima* and *Fritzius* in failing to disclose a pin-ring electrode configuration that collects dust particles and other particulate matter. Therefore, Claims 34, 40, 53, and 57 are patentable for at least the same reasons that Claims 25 and 44 from which they depend are patentable.

For these reasons, Applicants respectfully submit that the cited references fail to render the claimed subject matter obvious and request that the Patent Office withdraw the present rejection.

In the Office action, Claims 38 and 60 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Kawashima* and *Fritzius* as applied to claims 25 and 44 above, and further in view of US Patent No. 5,975,090 to Taylor (*"Taylor"*). The Office action took the position that *Taylor* teaches a pin electrode comprising conductive fibers, an element missing from *Kawashima.* As stated above, *Kawashima* and *Fritzius*, as applied to independent Claims 25 and 44, both fail to disclose a pin-ring electrode configuration that produces an electro kinetic airflow from the air inlet vent to the air outlet vent such that at least a portion of dust particles and other particulate matter in said airflow collect on said ring electrodes. For the reasons indicated above Claims 25 and 44 are believed to be patentable. Therefore, Claim 38 which depends from Claim 25 and Claim 60 which depends from Claim 44 are thought to be patentable, at least for the same reasons.

For these reasons, Applicants respectfully submit that the cited references fail to render the claimed subject matter obvious and request that the Patent Office withdraw the obviousness rejections.

Applicants have made an earnest endeavor to place this application in condition for allowance and such action is courteously solicited. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting prosecution of this application.

Respectfully submitted,

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